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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,144	09/21/2001	Masayuki Miyaji	MTS-3276US	4687

7590 04/21/2003

Allan Ratner
Ratner & Prestia
One Westlakes, Berwyn, Suite 301
P.O. Box 980
Valley Forge, PA 19482-0980

EXAMINER

CHOE, HENRY

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 04/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/961,144

Applicant(s)

Miyaji et al.

Examiner

Henry Choe

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Sep 21, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 9-12, 17, 18, and 20 is/are rejected.
- 7) ☒ Claim(s) 4, 7, 8, 13-16, 19, and 21-25 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Sep 21, 2001 is/are a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

Art Unit:

DETAILED ACTION

Label Figs 12-14 as "prior Art".

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5, 6, 9, 10-12, 17, 18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Maruyama (Fig. 1).

Regarding claim 1, Maruyama (Fig. 1) discloses a feedforward amplifier comprising a first power splitter (S1), a main amplifier (main amplifier 1), a second power splitter (upper part of 6), a first delay circuit (2), a distortion detection power-combiner (bottom part of 6), a second delay circuit (3), an error amplifier (auxiliary amplifier 4), a distortion suppression power-combiner (5), and control means (7, 8, 9). As described above, Maruyama (Fig. 1) discloses all the limitations in the claim 1 except for that the first and second vector adjusters. However, these elements are well known in the feedforward amplifier art.

Regarding claims 2, 3, 5, 6, 9, 10-12, 17, 18 and 20, Maruyama (Fig. 1) discloses a feedforward amplifier comprising first signal level detection means (7).

Art Unit:

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5, 6, 9, 10-12, 17, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (Fig. 12 of drawing) in view of Maruyama (Fig. 1).

Regarding claim 1, applicant's admitted prior art (Fig. 12 of drawing) discloses all the limitations in the claim 1 except for that the control means of at least stopping the operation of the error amplifier or the main amplifier. Maruyama (Fig. 1) discloses a feedforward amplifier comprising control means (7, 8, 9) which stops the operation of the error amplifier (auxiliary amplifier 4) when the detected level is lower than the reference level (see lines 12-16 of the abstract). It would have been obvious to one of ordinary skill in the art, at the time the invention was made would have found it obvious to have employed the control means at between the input terminal and the error amplifier of applicant's admitted prior art (Fig. 12 of drawing), such as taught by Maruyama (Fig. 1) in order to provide the advantageous benefit of reducing the power consumption of the feedforward amplifier.

Regarding claims 2, 3, 5, 6, 9, 10-12, 17, 18 and 20, Maruyama (Fig. 1) discloses a feedforward amplifier comprising first signal level detection means (7).

Art Unit:

Allowable Subject Matter

5. Claims 4, 7, 8, 13-16, 19 and 21-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for Allowance

6. The following is a statement of reasons for the indication of allowable subject matter: Regarding claim 4, the closest prior art of record, Maruyama (Fig. 1) does not disclose the following limitation: second signal level detection means. Regarding claims 7 and 8, the closest prior art of record, Maruyama (Fig. 1) does not disclose the following limitation: the distortion suppression power-combiner is a variable power-combiner which can have a tight coupling state and a loose coupling state. Regarding claims 13-16, the closest prior art of record, Maruyama (Fig. 1) does not disclose the following limitations: a third power splitter, a third delay circuit, a fourth power splitter, a fourth delay circuit, a second distortion detection power-combiner, a third vector adjuster, a second error amplifier, and a second distortion suppression power-combiner.

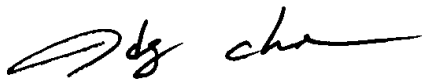
Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patent numbers (4,617,522; 6,489,844) are the feedforward amplifiers.

Art Unit:

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Choe whose telephone number is (703) 305-0576. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bob Pascal, can be reached on (703) 308-4909.

A handwritten signature in black ink, appearing to read "Henry Choe", with a stylized, flowing script.

Name: Henry Choe

Art Unit: 2817

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